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EXAMINER

KOVALICK, VINCENT E

ART UNIT

PAPER NUMBER

2673

DATE MAILED: 09/23/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/851,415

Applicant(s)

YAMAZAKI ET AL.

Examiner

Vincent E Kovalick

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6. 6) ☐ Other: _____

DETAILED ACTION

This Office Action is in response to Applicant's Patent Application, Serial No. 09/851,415, with a File date of May 9, 2001.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 and 26 rejected under 35 U.S.C. 102(e) as being anticipated by Harkin (USP 6,327,376).

Relative to claim 1, Harkin **teaches** an electronic apparatus comprising fingerprint sensing devices (col. 2, lines 39-67; col. 3, lines 1-67; col. 4, lines 10-67 and col. 5, lines 1-13);

Harkin further **teaches** a user identity authentication system comprising: a mobile information communication device (col. 10, lines 1-28 and Figs. 7-8); a liquid crystal display device (item 70 in Figs 7-8) provided in said mobile information communication device and an image sensor (item 10 in Fig. 5) built in said liquid crystal display (LCD) device, wherein said image sensor

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reads individual information of a user, an a user's identity is authenticated based on the individual information (col. 10, lines 10-28).

Regarding claim 26, Harkin **teaches** a user identity authentication method using a mobile information communication device provided with a liquid crystal display device comprising a built-in image sensor, said method comprising: a step of reading individual information of a user with said image sensor; and a step of authenticating a user's identity based on said individual information (col. 10 lines 10-28).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 7-10, 15, 17, 27, 29-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harkin as applied to claim 1 in item 2 herein above, and further in view of Katagiri et al. (USP 5,966,112).

Regarding claims 2 and 27, Harkin **does not teach** said user ID authentication system wherein the image sensor is constructed of photo diodes provided for respective pixels.

Harkin **teaches** a LCD comprising an image sensor wherein the said image sensor reads fingerprint information of the user for user identity authentication purposes.

Katagiri et al. **teaches** an integrated image-input type display unit (col. 2 lines 66-67; col. 3, lines 1-67 and col. 4, lines 1-48); Katagiri et al. further **teaches** said user identity system

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wherein the image sensor is constructed of photo diodes provided for respective pixels (col. 6, lines 43-52).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Harkin the feature as taught by Katagiri et al. in that it provides a solid state image sensor that lends itself to applications in miniature hand-held electronic devices (e.g.) miniature computer systems, PDA's or hand held computers/organizers. Regarding claims 7 and 29, Harkin further **teaches** said user identity (ID) authentication system wherein said mobile information communication device comprises an operation key and is configured to provide an operation of authenticating the user's identity by manipulating the operation key (col. 10, 29-36).

Regarding claims 8 and 30 Harkin **does not specifically teach** an operation key on said mobile information communication device can be manipulated by only a dominant hand of a user; it being obvious to a person of ordinary skill in the art at the time of the invention and in common practice that the manipulation of the buttons on a hand held telephone (Fig. 7) is normally done with a dominant hand of a user as is evidenced by the many automobile drivers who can initiate and operate a mobile phone with one hand while steering their car with the other. Further, the process of limiting the reference set to a particular hand or finger (and then the hand or finger that can be used to operated the device) is common and conventional, because this allows for the use of a smaller memory (which is a concern with small devices with limited memory availability).

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Regarding claims 9-10 and 31-32, Harkin **does not specifically teaches** said user ID authentication system wherein an operation key can be manipulated by only a forefinger or the thumb of said user; said steps being in common practice in the operation of a portable phone. or indicated with respect to claims 8 and 30 above.

Because said steps are in common practice and well known in the art it would have obvious to a person of ordinary skill in the art at the time of the invention that a finger or thumb pressing a key is well known for initiating an action by pressing a key or a switch. It would have been further obvious to a person of ordinary skill in the art at the time of the invention that any of the fingers or thumb that could reach said key, could be used to press the key.

As to claims 15 and 33, Harkin **does not specifically teaches** said identity authentication system wherein said mobile information communication device comprises a power source and is configured to provide authentication of said user's ID simultaneously with switching on the power source of said mobile information communication device. However this function is in common practice in the operation of electronic devices. For example, it is common to require authentication to power up computers that need a passwords before they can be used.

Because said function is in common practice and well know in the art, it would have been obvious to a person or ordinary skill in the art at the time of the invention that turning "on" the device power source would places the device in an operational mode to provide user ID authentication if initiated to do so.

Regarding claims 17 and 34, Harkin teaches said user ID authentication system wherein a fingerprint comprises said individual information (col. 10, lines 1-8). NOTE: the claims recites a "palm print and/or fingerprint".

5. Claims 19 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harkin taken with Katagiri et al. as applied to claims 2 and 27 in item 4 hereinabove, and further in view of Black (USP 6,539,101).

Relative to claims 19 and 35, Harkin taken with Katagiri et al. **does not teach** said user identity authentication system wherein said individual information comprises one or both of a palm print of a whole palm or a part of a palm.

Harkin taken with Katagiri et al. teaches a LCD comprising an image sensor wherein an image sensor reads fingerprint information of a user for user identify authentication purposes; wherein said image sensor is constructed of photo diodes.

Black teaches a method of identity verification (col. 4, lines 25-67; col. 5, lines 1-67 and col. 6, lines 1-16 and Figs 17 A-C); Black further **teaches** said user identity authentication system wherein said individual information can comprise a palm print of a whole palm (col. 21 lines 66-67 and col. 22, lines 1 and 8-10) in addition to the fingerprint.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Harkin taken with Katagiri et al. the feature as taught by Black in order to expand the system capability to authenticate the identification of a person using biometric means (palm print) other than just one fingerprint and to provide a more secure system.

6. Claims 3-4, 11-14, 16 and 18 rejected under 35 U.S.C. 103(a) as being unpatentable over Harkin as applied to claim 1 in item 2 above, and further in view of Scott (USP 6,484,260).

Relative to claims 3-4 Harkin **does not teach**, a user identity authentication system comprising a storage device and module for comparing individual information read by said image sensor with individual information stored in said storage device; or wherein the module for comparing is

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configured for judging whether the user can be identified or not by comparing individual information reads by said image sensor with individual information stored in said storage device. Harkin teaches an electronic apparatus comprising fingerprint sensing devices for use in user identity authentication based on user biometric characteristics, but does not provide the specifics of how that identification is performed.

Scott et al. **teaches** a personal ID system (col. 1, lines 46-67; col. 2 lines 1-43); Scott et al. further **teaches** a module for comparing individual information read by said image sensor with individual information stored in said storage device; and wherein the module for comparing is configured for judging whether the user can be identified or not by comparing individual information reads by said image sensor with individual information stored in said storage device (col. 6, lines 54-66). Harkin teaches an electronic apparatus comprising fingerprint sensing devices; Scott teaches a personal identification system including fingerprint identification with a hand-held device, and does provide the details of how the identification is performed. It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the devices as taught by Harkin the feature as taught by Scott et al. in order put in place the means for the sensed user ID characteristics (e. g. fingerprint) to be compared with individual user ID information in order to establish user authentication.

Regarding claim 11, Harkin further **teaches** said user identity (ID) authentication system wherein said mobile information communication device comprises an operation key and is configured to provide an operation of authenticating the user's identity by manipulating the operation key (col. 10, 29-36).

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Regarding claims 12, 13 and 14, see the remarks presented with regard to claims 8-10 , 30 and 32 hereinabove, which apply equally here.

As to claim 16, the remarks presented above with respect to claims 15 and 33 apply equally herein.

Regarding claim 18, the statements presented, above, with respect to claims 17 and 34 apply equally hereto.

7. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harkin taken with Scott as applied to claim 4 in item 6 hereinabove, and further in view of Black (USP 6,539,101).

Relative to claim 20, the statements presented as to claims 19, 35 above apply equally to claim 20

8. Claims 5 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harkin taken with Katagiri et al. as applied to claim 2 in item 4 hereinabove, and further in view of Kubo et al. (USP 6,456,279).

Regarding claims 5 and 28, Harkin taken with Katagiri et al. **does not teach** said user identity authentication system wherein the LCD is a reflection type liquid crystal display device.

Kubo et al. **teaches** a LCD device with a touch panel (col. 3, lines 35-60;) Kubo further **teaches** said LCD wherein the LCD crystal display device is a reflection type LCD (col. 1, lines 4-10 and col. 2, lines 26-34).

Harkin taken with Katagiri et al. teaches an electronic apparatus comprising fingerprint sensing devices with a LCD wherein each pixel has a second transistor with an associated photo diode.

Kubo et al. teaches a reflection type LCD. It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Harkin taken with Katagiri et al. the feature of a reflection type LDC device as taught by Kubo in order to provide the feature wherein external light incident from a display surface is approximately 100% reflected and used for display which eliminates contrast limitations experienced with LC panels, making the reflected display more compatible with a bright environment.

9. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harkin taken with Scott et al. as applied to claim 4 in item 6 hereinabove, and further in view of Kubo et al.).

Regarding claim 6, Harkin taken with Scott et al. **does not teach** said user identity authentication system wherein the LCD is a reflection type liquid crystal display device.

Harkin taken with Scott et al. teaches an electronic apparatus comprising fingerprint sensing devices incorporated in a mobile communication device. Kubo et al. teaches a reflection type LCD.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Harkin taken with Scott et al. the feature of a reflection type LDC device as taught by Kubo in order to provide the feature wherein external light incident from a display surface is approximately 100% reflected and used for display which eliminates contrast limitations experienced with LC panels, making the reflected display more compatible with a bright environment.

10. Claims 21-22 and 36-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harkin as applied to claim 1 in item 2 hereinabove, and further in view of Nobakht et al. (USP 6,587,873).

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Regarding claims 21 and 36, Harkin **does not teach** a user ID system wherein the image sensor reads individual information of a user and said individual information is transmitted via the Internet.

Nobakht et al. **teaches** networks and systems used to access the internet (col. 1, lines 58-67i and col. 2, lines 1-23); Nobakht et al. further **teaches** said user ID authentication system the image sensor reads individual information of a user and said individual information is transmitted via the internet (col. 1, lines 58-67 and col. 2, lines 8-23). Harkin provides an electronic apparatus comprising fingerprint sensing means. Nobakht et al. teaches a system to accommodate data transfer over the internet. It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Harkin the feature as taught by Nobakht et al. in order to provide the facilities to utilize the user identification means from locations remote to the user ID means.

Relative to claims 22 and 37, Nobakht et al. further **teaches** said user ID authentication system wherein the individual information is transmitted via the internet only when necessary, in accordance with a transmission necessity judged based on a degree of requirement set in said mobile information communication device or a destination terminal of communication (col. 1, lines 58-67 and col. 2, lines 8-20). While Nobakht et al. does not explicitly state transmitting “only when necessary” it does indicate “selectively” downloading the information (col. 2, lines 3-7). Further it is common in devices connected to the internet to check for the requested data locally and only transmit the request via the internet when the data is not present locally.

It would have been obvious to a person of ordinary skill in the art at the time of the invention

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because of the conventionality (as indicated above) of doing so and because this will allow for a more secure device as additional references can be down loaded.,

11. Claims 24 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harkin in view of Nobakht et al as applied to claims 22 and 37 in item 10 hereinabove and further in view of Kubo et al.

Relative to claims 24 and 38, Harkin in view of Nobakht et al. **does not teach** said user identity authentication system wherein the LCD is a reflection type liquid crystal display device.

Harkin taken with Nobakht et al. teaches an electronic apparatus comprising fingerprint sensing devices with the system means to accommodate data transfer over the internet. Kubo et al.

teaches a reflection type LCD. It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Harkin taken with Nobakht et al. the feature of a reflection type LDC device as taught by Kubo in order to provide the feature wherein external light incident from a display surface is approximately 100% reflected and used for display which eliminates contrast limitations experienced with LC panels, making the reflected display more compatible with a bright environment.

12. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harkin taken with Scott et al. and further in view of Nobakht et al.

Regarding claim 23, Harkin taken with Scott et al. **does not teach** said user ID authentication system comprising a module for transmitting a result of the authentication via the internet.

Harkin in view of Scott et al. teaches an electronic apparatus comprising fingerprint sensing devices incorporated in a portable communication device. Nobakht et al. teaches a system for

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accommodate data transfer over the internet between a base station and a remote station. It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Harkin in view of Scott et al. the feature as taught by Nobakht et al. in order to put in place the means to verify authorized users between a base system in communicating with a mobile communication device.

13. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harkin in view of Scott et al. and further in view of Nobakht et al. as applied to claim 23 in item 12 hereinabove taken with Kubo et al.

Regarding claim 25, Harkin in view of Scott et al. and further in view of Nobakht et al. **does not teach** said user ID system wherein said LCD device is a reflection type LCD device.

Harkin in view of Scott et al. and further in view of Nobakht et al. teaches an electronic apparatus comprising fingerprint sensing devices incorporated in a portable communication device with the means to communicate over the internet. Kubo et al. teaches a LCD in which an illumination light source is stacked on a reflection type LC panel. It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Harkin in view of Scott et al. and further in view of Nobakht et al. the feature as taught by Kubo et al. in order to provide the feature wherein external light incident from a display surface is approximately 100% reflected and used for display which eliminates contrast limitations experienced with LC panels, making the reflected display more compatible with a bright environment.

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14. Claims 39-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harkin taken with Katagiri et al. as applied to claim 2 in item 4 hereinabove and further in view of Ishii (USP 6,594,505).

Regarding claims 39-40, Harkin taken with Katagiri et al. **does not teach** a mobile telephonic device comprising a flash memory wherein the said flash memory is stored with individual information of a user.

Harkin taken with Katagiri et al. teaches a an electronic apparatus including a LCD comprising fingerprint sensing means wherein each LCD pixel has a second transistor with an associated photo diode.

Ishii **teaches** a mobile telephone system capable of coping with a variety of mobile radio telephone systems (col. 2, lines 11-67 and col. 3, lines 1- 27 and Fig. 1); Ishii further **teaches** said system comprising a flash memory wherein the said flash memory is stored with individual information of a user (col. 3, lines 52-54; col. 11, lines 52-55 and Fig. 6 item 38).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Harkin taken with Katagiri et al. the feature as taught by Ishii in order to provide a nonvolatile storage means that can be updated with additional user ID information.

15. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harkin taken with Katagiri et al. as applied to claim 40 in item 14 herein above, and further in view of Kubo et al.

Regarding claim 41, Harkin taken with Katagiri et al. in view of Ishii **does not teach** said mobile telephonic device wherein said LCD device is a reflection type LCD device.

Kubo et al **teaches** said LCD wherein the LCD crystal display device is a reflection type LCD (col. 1, lines 4-10 and col. 2, lines 26-34).

Harkin taken with Katagiri et al. in view of Ishii teaches a an electronic apparatus including a LCD comprising fingerprint sensing means wherein each LCD pixel has a second transistor with an associated photo diode wherein the apparatus further comprises nonvolatile storage means with an image sensor constructed of photo diodes. Kubo et al. **teaches** said LCD wherein the LCD crystal display device is a reflection type LCD.

Harkin taken with Katagiri et al. in view of Ishii teaches a an electronic apparatus including a LCD comprising fingerprint sensing means wherein each LCD pixel has a second transistor with an associated photo diode wherein the apparatus further comprises nonvolatile storage means with an image sensor constructed of photo diodes. Kubo et al. teaches a reflection type LCD. It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Harkin taken with Katagiri et al. in view of Ishii the feature as taught by Kubo et al. in order to provide the means wherein external light incident from a display surface is approximately 100% reflected and used for display which eliminates contrast limitations experienced with LC panels, making the reflected display more compatible with a bright environment.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

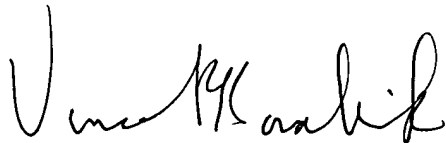
U. S. Patent No.	6,476,374	Kozlowski et al.
U. S. Patent No.	6,070,796	Sirbu

Responses

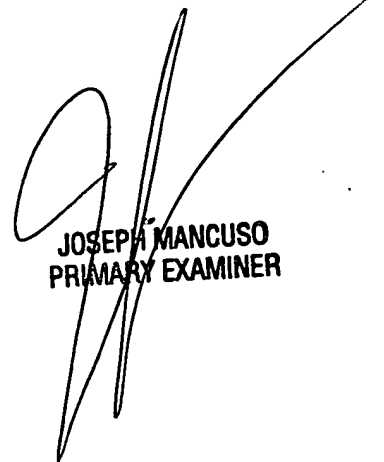
17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vincent E Kovalick whose telephone number is 703 306-3020. The examiner can normally be reached on Monday-Thursday 7:30- 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 703 305-4938. The fax phone numbers for the organization where this application or proceeding is assigned are 703 872-9314 for regular communications and 703 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 306-0377.



Vincent E. Kovalick
8/26/03



JOSEPH MANCUSO
PRIMARY EXAMINER